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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,685	04/22/2005	Einar Moen	Q8-4077	4835
23373 7590 10/14/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER SINGH, SATYENDRA K				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,685

Applicant(s)

MOEN ET AL.

Examiner

SATYENDRA K. SINGH

Art Unit

1657

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 13, 14, 25-27, 30-33, 35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 13, 14, 25-27, 30-33, 35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's submission filed on 06/22/09 (along with claim amendments and a declaration by Gunnar Kleppe filed on 10/8/2009 under 37 CFR 132) has been entered.

Claims 1-10 and 12 have been canceled by applicants. Claims 15-24, 28-29, 34 and 36 were previously canceled by applicants.

Claims 11, 13, 14, 25-27, 30-33, 35 and 37 (applicant's originally elected invention of group II, as currently amended; directed to "**a sterile microorganism growth substrate**") are being examined on their merits, herein.

Specification-Title Change

The title of this application has been changed to the following (see response, page 8, and amendment to specification, page 2):

"Microorganism growth substrate comprising a biomass derived from methanotrophic bacteria"

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names **joint inventors**. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 11, 13, 14, 25-27, 30-33, 35 and 37 (as currently amended) are/remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bothe et al (2002; IDS) taken with Norferm, DA (Product brochure, 1998; IDS) and Larsen & Joergensen (1996; IDS), and in view of Atlas & Parks (Handbook of Microbiological Media, 1993 edition; [U]) and Patz et al (DD 290,917; IDS, an English translation was provided by the office in previous office action).

Claims are generally directed to a **sterile microorganism growth substrate** comprising: (a) a sterilized nutrient composition, wherein said composition is a sterile-biomass generated from bacterial cells by autolysis, followed by ultrafiltration and evaporation, wherein said bacterial cells comprise *Methylococcus capsulatus* (Bath) (strain NCIMB 41526), *Ralstonia* sp. DB3 (strain NCIMB 41527), *Aneurinibacillus* sp. DB4 (strain NCIMB 41528) and *Brevibacillus agri* DB5 (strain NCIMB 41525); (b) at least one sterile nutrient, which is a carbon source, added to the biomass, wherein said at least one sterile nutrient is glucose; and (c) optionally a sterile diluent (see recitations of amended claims).

"[E]ven though **product-by-process claims** are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Bothe et al (IDS) disclose a composition (i.e. a bacterial biomass) comprising biomass generated from bacterial cells, wherein bacterial cells comprising at least one species of

methanotrophic bacteria (such as *M. capsulatus* (Bath) NCIMB 11132) (see Bothe et al, abstract, page 34, materials & methods, in particular; and the disclosure of the protein-rich biomass obtained from said bacterium grown on methane as a carbon source, oxygen, ammonia, and minerals, and water in a reactor, and centrifuged, **ultrafiltered**, heat-inactivated, and finally **spray-dried** (i.e. evaporated) in the form of a free-flowing, granulated product that is suitable for various applications as a high protein and nutrient source (see Norferm, DA, product brochure, 1998 for "**BioProtein**") and heterotrophic bacteria (such as *Ralstonia* sp., **DB3**; *Aneurinibacillus* sp., **DB4**; *Brevibacillus* sp, **DB5**; see Bothe et al, abstract, pages 34, 35 and 38, in particular), at least one sterile nutrient (such as components of nitrate/mineral salts, NMS medium as described by Larsen & Joergensen; cited on page 138, left column, in particular).

However, a sterile microorganism growth substrate comprising a biomass generated by **autolysis**, and at least one sterile nutrient, which is a carbon source, comprising at least one **sterile nutrient** added to the biomass, such as **glucose**, or a combination of nitrate and mineral salts that is present in a **weight ratio on a dry mass basis** (as specifically recited in instant claims), is not explicitly disclosed by the combined disclosures of Bothe et al (taken with the disclosures of Norferm, DA and Larsen & Joergensen).

Atlas & Parks [U] provide the detailed disclosure about various nutrient media compositions (i.e. sterile microorganism growth substrates) routinely used for the cultivation of microorganisms (on solid as well as liquid media) including methanotrophic and heterotrophic bacteria (see Atlas & parks, for various methanotrophic bacteria, pages 574-579; and for heterotrophs such as various lactic acid bacteria and *Lactobacillus* species, pages 483-488, in particular). Atlas & Parks teach the use of **glucose as a sterile nutrient** for use in various media compositions is routinely used for cultivation of various microbial species (see Atlas & Parks, pages 576, 483-488, in particular), and also the use of **nitrate and mineral salts** (see Atlas & Parks, pages 574-575, in addition to the teachings from Larsen & Joergensen, page 138, left

column, 1st paragraph, in particular) in the cultivation of microorganisms (being especially useful in the cultivation of methanotrophic bacteria). In addition, Atlas & Parks teach the fact that all growth media (be it solid or liquid) are customarily autoclaved (or filtered sterilized for heat sensitive biologic materials, such as vitamins, etc.) before use in the preparation of a microbial growth substrate to be useful in the processes of growing or culturing desired microorganisms (see sections on the “Preparation of Medium”, page 577, in particular).

Patz et al [U] teach a microorganism growth substrate comprising a nutrient composition (chemical thermal **hydrolysate**; see Patz et al, page 3, substance of the invention, and page 5, first paragraph, and example 1, in particular; taken as an autolysate of a methanotrophic bacteria) generated from the biomass of a culture of methanotrophic bacteria (a methylotrophic bacteria such as *Methylobacterium rhodesianum* IMET 11401; see Patz et al, page 1, claims and page 3, substance of the invention, in particular) further comprising at least one sterile nutrient (such as methanol as a carbon source, and optionally containing a diluent (such as water; see Patz et al, example 1 and 2, pages 6 and 7, in particular). Patz et al also teach sterile nutrient medium for fermentation of bacteria containing nitrate and mineral salts and combinations thereof (such as iron, copper, magnesium, manganese, zinc, nickel, boron, calcium, potassium, sodium, cobalt; see Patz et al, page 7, in particular). Thus, they demonstrate the fact that a hydrolysate (i.e. in the absence of any structural difference recited in the claims, taken as autolysate) derived from a methanotrophic bacterial biomass can be effectively used as a growth substrate for microorganisms such as bacteria.

Therefore, given the detailed disclosure for the components of the claimed microorganism growth substrate composition in the cited prior art references, it would have been

obvious to a person of ordinary skill in the microbiological art, at the time this invention was made, to modify the growth substrate composition (i.e. comprising the biomass) of Bothe et al (taken with the disclosures of Norferm, DA and Larsen & Joergensen, as discussed above) such that the growth substrate comprises an autolysed biomass generated from the methanotrophic and heterotrophic bacteria (as disclosed by Bothe et al), and a sterile nutrient as a carbon source, such as glucose, and further contains nitrate and mineral salts, and/or a combinations thereof, as explicitly suggested and disclosed by Atlas & parks (in view of Patz et al), and is sterilized using art-recognized means in order to be suitable for use as a sterile composition for growth of desired microorganisms.

The person of ordinary skill would be motivated to modify the growth substrate composition comprising the lysed biomass generated from methanotrophic and heterotrophic bacterial cultures (strains as specifically taught by Bothe et al taken with Patz et al) because the sterile nutrient compositions containing glucose, nitrate and mineral salts have been routinely used in the cultivation of various microorganisms (including methanotrophic as well as heterotrophic microorganisms) as explicitly disclosed by Atlas & parks (see discussion, supra). Furthermore, given the disclosure of Patz et al for the use of a lysed bacterial biomass (a methanotrophic **bacterial hydrolysate** used as a nutrient source; see disclosure above) for cultivation of bacteria, an artisan of ordinary skill in the microbial fermentation art would be highly motivated to use this protein-rich biomass generated from methanotrophic bacteria (that typically grow along with specific heterotrophic bacteria as discussed above), as a nutrient source when making a sterile growth substrate composition (for example, a culture medium) suitable for growth of various microorganisms.

One of ordinary skill in the microbial art would have had a reasonable expectation of success when modifying the composition according to the disclosures of Atlas & Parks and Patz et al, because the prior art references have explicitly disclosed the amounts, ratios and method of preparation (including method of sterilization, such as autoclaving and filter sterilization) of such sterile growth media/substrate compositions that are useful in cultivation of various microorganisms.

Although, the cited prior art references do not explicitly teach a microorganism growth substrate composition wherein the sterile nutrient such as glucose, or a combination of nitrate and mineral salts are present in specific **dry mass basis** (as recited in the instant claims) in relation to the sterile biomass (obtained from the culture of methanotrophic and heterotrophic bacteria) used in the invention as claimed, use of such specific ratios of required nutrients (alone as well as in combinations thereof) in relation to the biomass used in said composition would have been obvious and routine to a person of ordinary skill in the microbial art (As evident by the fact that the optimum amounts of sterile nutrient such as glucose, and nitrate and mineral salts are explicitly disclosed by the referenced inventions of Larsen & Joergensen, Atlas & Parks and Patz et al; see discussions above). The selection of specific ratios to be used of the nutrient components (in relation to the biomass used) in the claimed growth substrate composition would have been a routine matter of optimization on the part of the artisan of ordinary skill, said artisan recognizing that it is a routine procedure to optimized the ratios of ingredients for the culture of any given individual microorganism (relative to other components or nutrients used in the composition) in order to obtain an optimum growth rate and yield of specific cultured microbial product, or a desired microbial biomass. Furthermore, given the fact that sterile nutrients such as

nitrate and mineral salts have been used by Bothe et al (in view of Larsen & Joergensen) in the cultivation of Methanotrophic bacteria (such as *Methylococcus capsulatus* (Bath) strain) using the composition as claimed, it would have been a matter of routine optimization of the medium composition as well as of specific ratios of the sterile nutrient in relation to the biomass used to arrive at an optimum growth substrate composition. Therefore, a holding of obviousness over the cited claims is proper.

Thus, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the microbial art at the time this invention was made.

As per MPEP 2144.05 [R3], II. OPTIMIZATION OF RANGES - A. Optimization Within Prior Art Conditions or Through Routine Experimentation: Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

As per MPEP 2144.06, "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

As per MPEP 2111.01, during examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, F.3d, 2004 WL 1067528 (Fed. Cir. May 13, 2004)(The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation.). This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Response to Arguments- Obviousness rejection

Applicant's arguments filed 6/22/09 along with the 132 declaration filed on 10/8/09 by Gunner KLEPPE have been fully considered but they are not found to be persuasive for the following reasons of record:

Applicants arguments (see page 10-11, in particular) that "*...the specification as filed provides a demonstration of unexpected properties through a comparison of...such*

unpredictability is also relevant to rebuttal of an obviousness rejection by a showing of unexpected results" are noted and fully considered. However, the results provided in Table 1 and example 2 (see specification, pages 6-8, in particular) seem to be the test results of the combination of various biomass fractions, as per applicants own disclosure:

"Microorganism growth media were produced by adding BP Homogenizate, BP Autolysate, BP Extract, BP Retentate **and** BP Permeate to demineralized water at a concentration of **1g/L**. These media were then used either directly or with the addition of 0.1 g/L glucose and/or 32.4 mL/L Nitrate Mineral Salt medium (NMS)."

In addition, the conclusions drawn by applicants (see foot note to the Table 1, in particular) using the example 2 results also shows the fact that only "BP extract" (though the amounts used in the media for comparison is uncertain for the reasons as discussed above) was able to provide "*clearly better*" growth results than the control substrates. Current claims (see instant claim 11 or 37) are drawn to a growth substrate composition that does not require particular amount(s) of the bacterial biomass generated through the process steps (such as ultrafiltration and evaporation) providing various fractions having superior growth properties as currently argued by applicants. In fact, it is not clear from the example 2, if said fractions as argued by applicants have been used singly or in certain combination(s) to provide the results as depicted in Table 1. Thus, the argument that "*...This same data also demonstrates substantial unpredictability in the pertinent art area, i.e., as to which biomass processing steps result in a biomass imparting the unexpectedly superior broad-spectrum growth characteristics to a growth substrate. As discussed above, such unpredictability is also relevant to rebuttal of an obviousness rejection by a showing of unexpected results*", is fully noted but is not found to be persuasive for the above reasons of record.

Applicant's arguments regarding the declaration submitted by Gunnar Kleppe under 37 CFR 1.132 (see response, page 12, in particular) asserting the claimed composition as having a "remarkable suitability as a broad-spectrum growth medium" in view of the results presented in Table A (see page 4 of the declaration, in particular) is fully noted and considered. However, it is noted that the amounts used (i.e. g/L of the biomass fractions; see Table B on page 4 of the declaration) for preparing and testing the growth of various bacteria range between 0.1 g/L to 4 g/L, which is significantly different than the disclosed amounts (i.e. 1 g/L when taken as being used singly, though it is not clear if they were used alone or in combination by the instant disclosure) on page 6 of the instant specification for obtaining results presented in Table 1 (see applicant's response at page 12 stating that "*The data in Tables A and B on page 4 of the Rule 132 Declaration represent the raw data used to compile Table 1 in the specification as filed*"). Nevertheless, it seems apparent from the experimental data presented in the declaration that only the fraction known as "BP extract" was able to demonstrate a superior and consistent ability to provide growth for all the bacteria tested, and the amounts of said biomass fraction required in the media to provide such growth varied depending on the bacteria tested (i.e. from 0.1 g/L to 4 g/L, see Table B on page 4 of the declaration). Thus, applicant's argument (see response, page 13, 1st paragraph, in particular) that "*...the unexpected properties are commensurate with the scope of the present claims, because Applicants have demonstrated that compositions containing just BP Extract (or BP Autolysate) and glucose possess this unexpected property*", is noted and fully considered but is not found to be persuasive for the above discussed reasons of record. The scope of the showing must be commensurate with the scope of claims to consider evidence probative of unexpected results, for example. *In re Dill*, 202 USPQ 805 (CCPA, 1979), *In re*

Lindner 173 USPQ 356 (CCPA 1972), In re Hyson, 172 USPQ 399 (CCPA 1972), In re Boesch, 205 USPQ 215, (CCPA 1980), In re Grasselli, 218 USPQ 769 (Fed. Cir. 1983), In re Clemens, 206 USPQ 289 (CCPA 1980). It should be clear that the probative value of the data is not commensurate in scope with the degree of protection sought by the claim. The composition as claimed is open to any amounts of bacterial biomass from the four different bacterial species as recited in the claims (see claims 11 and 37, in particular), which does not necessarily correlate with the asserted unexpected and surprising results as presented in the Kleppe's declaration because the bacterial biomass used in these experiments comprise mostly *M. capsulatus* (obtained through fermentation known as "Bioprotein"; see declaration, page 1, paragraph 2; and Norform DA product brochure and Bothe et al, cited as prior art in the obviousness rejection of record; see Bothe et al, page 34, left column, 1st paragraph, in particular) and small amounts of the other three heterotrophic bacteria, the distribution of which may further depend on the growth medium such as pure methane, natural gas, mixtures of methane and ethanol, etc. Thus, the probative value of the data is not commensurate in scope with the degree of protection sought by the claims.

It is also noted that the declaration refers to several prior art references (see page 5, 1st paragraph, in particular, and attached prior art), which have not been made of record by applicants in the form of an IDS, therefore, the references have been placed in file, but the disclosure contained therein has not been considered for the record.

Since, all the components of the claimed composition are fully disclosed and/or suggested by the combination of cited prior art references for use as a growth substrate, the obviousness rejection of record is still deemed proper, and is therefore, maintained. Presentation

of claims commensurate in scope of the unexpected showing may be considered favorably in order to advance the prosecution further.

Obviousness-type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 11, 13, 14, 25-27, 30-33, 35 and 37 remain provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8 and 13-25 and 27 of copending Application No. **10/504,463** (same inventive entity, same assignee). Although the conflicting claims are not identical, they are not patentably distinct from each other because pending claims in said co-pending application are also directed to a product-by-process (i.e. a composition), which is derived from a biomass autolysate generated from the cultured biomass of a methanotrophic bacterium. Since, the two sets of pending claims are co-extensive in scope, an obviousness-type double patenting rejection is clearly required.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to ODP Arguments

Since, applicants have deferred an appropriate response at the present time (see response, page 16, in particular), the provisional ODP rejection of record, as set forth in the previous office action and as discussed above over the co-pending application 10/504,463, is still maintained.

Conclusion

NO claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATYENDRA K. SINGH whose telephone number is (571)272-8790. The examiner can normally be reached on 9-5MF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Satyendra K. Singh/
Examiner, Art Unit 1657

/JON P WEBER/
Supervisory Patent Examiner, Art Unit 1657